

Hans Ecke

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Skills

- **Numerical and computational Geophysics:** Develop data processing algorithms and implement them in C, C++, Perl, Matlab and other languages. Proficient in the programming of the ProMAX and Seismic Unix processing packages. Fascinated with large-scale problems and the intersection between scientific theory and computer implementation.
- **Rock Physics:** Laboratory measurements, data processing and theoretical analysis.
- **Software Engineering:** Active languages: C, C++, Perl, HTML, Bourne Shell, SQL, Assembler. Working knowledge of Java, Python and Lisp. Software development in diverse teams as leader or contributor. Able to create portable, maintainable, user-friendly programs.
- **System administration:** Administered AIX, HP-UX, Solaris, IRIX, Linux, MS Windows. Main strength is Linux, 12 years experience. System administrator, webmaster, security educator for a heterogeneous workstation cluster.
- **Communication:** Fluent in written and spoken English and German. Basic Russian. Comfortable in diverse teams. Effective communication with clients, programmers, geophysicists and managers.

Experience

GX Technology, AXIS Imaging Division, Denver CO May 2005 – present

Research & Development Geophysicist

- Develop custom seismic data processing modules for velocity analysis and anisotropic processing.
- Maintain and refactor the AXIS P-wave anisotropic codes. Develop a testsuite for processing QC.
- Reverse engineer large parts of the ProMAX system and develop an automation framework.

Colorado School of Mines, Golden CO January 1999 – May 2005

Study of Geophysics at a graduate level; Research Assistant

- Research hydrocarbon fluid properties under reservoir conditions at the CSM Center for Rock Physics. Acquire data in practical lab measurements, process, analyze and interpret.
- Co-design the future direction of the computational education in the department. Publication.
- Modernize the COOOL C++ library of optimization algorithms.
- Program and maintain the Common Ground rock properties database and its web interface.
- Education and supervision of fellow research assistants.

Landmark Graphics Corporation, Denver CO Summer 2000 and 2001

Internship as Tester/Developer

- Test the ProMAX data processing package and write a testing framework in Perl and Lisp.

Freiberg University of Technology, Freiberg Germany September 1996 – January 1999

Study of Geophysics at an undergraduate level; Research Assistant

- Scientific programmer for a sensor to measure groundwater flow (real time, visualization)
- Modeling the distribution of electromagnetic properties in the earth. (Qt, GUI, massive data)

Education

May 2005 Master of Science in Geophysics
Thesis title: *Seismic Velocity Calibration: Fluids, Pressures and Frequencies*
Colorado School of Mines, Golden Colorado

December 1998 Vordiplom (USA Bachelors degree equivalent) in Geophysics
Freiberg University of Technology, Freiberg Germany

1997 – 2004 Received a German National Merit Foundation scholarship